**“Arrrr”ticulation Therapy for /r/**

**Kansas Speech-Language-Hearing Association**
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**Summary of Structures**

- Eight muscles intertwine to form a flexible band of muscles (similar to an elephant’s trunk or octopus tentacle)
- The tongue reaches adult size by around 8 years of age
- The mandible should play a supporting role, not a primary role in the production of /r/. In order for this to occur, tongue stability needs to be established

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**Developmental Norms**

<table>
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<th>Age</th>
<th>4 ½</th>
<th>5</th>
<th>6</th>
<th>6 ½</th>
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<td>Templin, 1957</td>
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<tr>
<td>Bowen, 1978</td>
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<td>Sanders, 1972</td>
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<td>✓</td>
<td></td>
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<tr>
<td>GFTA, 2000</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>Smit, 1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
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</tbody>
</table>

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**Impact of Articulation Errors on Academic Performance**

- Verbal Communication - across all academic areas
- Written Communication – errors can affect semantics and comprehension (both as a reader and a writer) ex. “run and one”, “witch and rich”, “wing and ring”, “white and right”, etc.

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**Assessment**

- Standardized assessments typically consider...
  - /r/ in the initial position
  - /r/ in the medial position
  - /r/ blends
  - /er/

- However, this does not fully take into consideration the added level of complexity of vowel controlled /r/

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**Criterion Reference Testing**

- Complete criterion reference testing frequently
- Use the data to inform treatment decisions
- Share the data with the student to assist motivation
- Share the data with caregivers to demonstrate progress over time

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Dismissal

- Begin talking about dismissal at the beginning of treatment
- Dismissal may be considered when it appears...
  1. The errors are no longer present through the conversational level
  2. Optimal proficiency has been reached
  3. The disability no longer has an adverse effect on the student’s ability to access and progress with the educational curriculum
  4. The benefits of receiving these services no longer outweigh the potential for missing curricular instruction

/r/

- Initial position
- Medial position (starting the second syllable)
- Blends
- The vowel /r/ (can be in any position of a word)
  - ar
  - ear
  - er
  - or
  - ir
  - air
  - *r +l/

When Remediating /r/

- Initially Avoid
- Words that include rounded vowels such as /ou, ow/ or /oo, oo/
- Consonant blends with bilabials such as /pr/ and /br/
- Words with mixed /r/s
- Obtain consistent production of one vowel controlled /r/ before moving on to another
- Begin with the vowel controlled /r/ that is most stimulable

Production: Two Types of /r/

1. Retracted /r/
   - Do not move the lips
   - Limit the use of the jaw
   - Tongue is in the back of the mouth with the sides of the tongue elevated
2. Retroflex /r/
   - Tongue is in the back of the mouth with the tongue tip elevated

Metalinguistic Cues

Describe it as a Process:
- No lips
- No jaw
- Tongue back
- /r/ warm up
- Toothbrush Cup Practice

"The essence of the discrete skill memeplex is that complex behaviors, like speech production, can be broken down into discrete sequences of processes and behaviors, and the best instruction and intervention involves discrete skills training, bottom-up approaches, task analyses, and developmentally sequenced materials. The clinical practice memeplex reflects a set of common clinical practices that contribute to the use of NSOMEs. These factors include the desire to provide state-of-the-art treatment, a preference for broad-based, eclectic treatment approaches, and diverse and engaging activities that offer opportunities for measurable success. There are so many reasons to use NSOMEs that the more interesting question may be why some clinicians (< 15%) do not use these activities."


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Elicitation Strategies

- “Bite Blocks”
- Fun with food
- “Open Mouth” /r/ words:
  - Rock
  - Rain
  - Red
  - Ring
  - Carrot
  - Carry
  - Hero
  - Hero
  - Ring
  - Red
  - Rocket
  - Dairy
  - Carry
  - Hero
  - Hero
  - Ring
  - Red
  - Rocket
  - Dairy
  - Carry
  - Hero
  - Hero
  - Ring
  - Red
  - Rocket
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  - Carry
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  - Hero
  - Ring
  - Red
  - Rocket
  - Dairy
  - Carry
  - Hero
  - Hero

Elicitation Strategies (contd.)

- “Lip Spray”
- Become a Ventriloquist
- Put a finger beside the lip
- Use a mirror or audio recording tool
- Slide the tongue back while saying “ler”
- Initial /kr, gr/ and final /rk/ blends
- Shape /r/ from /eel/… /y/ to /yer/
- Visual Imagery - “arrr” like a pirate, “grrr” like a tiger, “errr” like a rooster

Automaticity and Repetition Activities

- 5 sets of 5
  - Pirate Dice
  - Sweet Treat Challenge
  - Funny Flips book
  - Tongue Twisters

Fun Favorites

- Talk Like A Pirate Day – September 19th
- Create your own deck from around the school
- Speech Jokes
- Poetry Race

Troubleshooting

- Lip rounding- Avoid targeting words with bilabials, rounded vowels and multiple /r/s
- Use of jaw
- Nasalization
- Sound dropping
- Mid-blade production
- “Pushed” or poorly blended